

THE NATIONAL INSTITUTE OF
INDUSTRIAL PSYCHOLOGY



COMMENTS ON THE JOB

Views of Employees in Six Companies

BY

ISABEL BLAIN

PUBLISHED IN LONDON BY THE
NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY
14, WELBECK STREET, W.1

COMMENTS ON THE JOB

Views of Employees in Six Companies

A STUDY BY

ISABEL BLAIN

of data collected by Institute investigators
during employee attitude surveys

PUBLISHED IN LONDON BY THE
NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY
14, WELBECK STREET, W.1.

1958

CONTENTS

	<i>Page</i>
FOREWORD	
INTRODUCTION AND SUMMARY	1
METHOD OF STUDY AND OUTLINE OF RESULTS	3
THE DATA	3
THE METHOD OF STUDY	3
THE MOST FREQUENTLY MENTIONED SUBJECTS	3
MEN OPERATIVES' COMMENTS COMPARED WITH THOSE OF WOMEN OPERATIVES	4
WHAT PEOPLE SAID	5
POLICY AND STRUCTURE OF THE ORGANISATION	5
ORGANISATION OF WORK	5
ORGANISATION OF PERSONNEL	6
PAY	9
HOURS AND HOLIDAYS	11
WELFARE	12
COMMUNICATIONS AND RELATIONSHIPS	13
PHYSICAL CONDITIONS	15
DISCUSSION	16
CONCLUSION	17

TABLES

I	NUMBER EMPLOYED, NUMBER INTERVIEWED AND NUMBER OF COMMENTS PER PERSON, BY COMPANY	18
II	SUBJECT OF COMMENT BY AVERAGE NUMBER OF COMMENTS PER PERSON	19
III	MAIN HEADINGS AND SUB HEADINGS IN STANDARD CLASSIFICATION	20
IV	NUMBER OF PEOPLE COMMENTING ON HOURS	12

FOREWORD

THIS report deals with an inquiry of a basically different nature from earlier researches of the Institute. The inquiry did not involve the special collection for research purposes of material throwing light on people's attitudes to their working life. The data already existed in the Institute's files, and had been collected in the course of studies of the situation in six companies, which had sought the Institute's collaboration during 1955 and 1956. This fact has influenced both the method of study and the presentation of the findings. The interviews which provided the material for analysis were conducted with the aim of making a diagnosis of the general situation in the six companies, each of which hoped thus to obtain guidance about the ways in which conditions, methods or organisation of work might be improved.

The interviews were confidential; the employee was assured that what he said would be reported to the management but in such a way that the person making any particular comment could not be identified unless he expressed a definite wish to have his name quoted. They were also 'free', that is, the psychologist did not ask questions; he merely invited the employee to make any comment he liked about his job or about any aspect of the policy and practice of the employing firm. It is reasonable to suppose, therefore, that the statements made concerned the genuine preoccupations of the employees and were not artifacts of a research situation.

Nearly 1,700 people had been interviewed in the six companies and they had made over 11,000 comments. It seemed worth while to re-examine these comments to see whether any consistent patterns or trends would be apparent despite the very different circumstances of the six factories. Because the purpose of the surveys had been to discover employees' views which might point to desirable improvements in their working situation, and this had been made clear to people before the interviews began, the material consisted mainly of criticisms and suggestions for change. But if there was evidence that similar comments or comments upon similar matters had been frequently made despite the differences between the factories, this would be of some significance.

Although it would certainly be dangerous to base any generalizations on the results of this inquiry, the broad lines of emphasis which it reveals are interesting, and the verbatim comments made by employees which are quoted in the report frequently throw light on the reasons which led people to make critical or favourable remarks.

C. B. FRISBY,
Director.

14, Welbeck Street,
London, W.1.
21st July, 1958.

COMMENTS ON THE JOB

INTRODUCTION AND SUMMARY

Simple beginnings may have important developments. In the middle nineteen-thirties, the National Institute of Industrial Psychology was asked by a large and well known company to help in solving a staffing problem. The company's employment policy was progressive and reasons for a very high rate of leaving were obscure. It was arranged to take the (then) unorthodox step of inviting employees to come, in confidence, to the Institute's investigator to give suggestions for improvements in their working conditions or to mention features of them which they would like to see changed. These interviews had far reaching results; from their success stems a technique which has been fruitfully applied in the United Kingdom to the diagnosis of many working situations, in industry, shops and offices, hospitals and voluntary organisations. It brings to the study of people in their working environment, and particularly in relation to difficulties they experience, a special combination of human understanding with scientific discipline.

The core of the method consists in confidential, undirected interviews with a sample of employees of all levels; the interviews are conducted by an impartial investigator who is not on the staff of the organisation, and in whose freedom from bias all concerned may have confidence. The procedure is sponsored by the executive head of the organisation, who personally explains it to employees and invites

them to give to the investigator, under assurance of anonymity, any suggestions, criticisms or complaints that affect their job or their experience of work with the organisation. The people to be interviewed are chosen by a sampling technique; the proportion varies with circumstances, and is intended to ensure a good representation of workers of different kinds. Interviews are completely undirected; the investigator's role is restricted to listening and to noting every comment which is made, asking questions only when necessary to ensure that he himself understands a statement, and refraining from any remark which might suggest a new train of thought to interviewees.

Many of the comments received are critical, and some are based on misunderstanding rather than on fact. All, however, are in due course reported to the management, because to remove misunderstandings may be as urgent as to deal with justified criticisms or good suggestions. Fact must be distinguished from fancy before executive action is taken, but both contribute to a diagnosis of the state of affairs, material, administrative or psychological, that exists within the organisation.

After many years of experience, during which the Institute's technique in this work was progressively improved, there was developed a standard system for classifying subjects raised in such interviews. It provided convenient, ordered categories to which could be

assigned remarks relating to any aspect of working life, and it was intended to facilitate future study of the accumulating material. The frequency with which any remark occurred was put on record, and attention was drawn to statements made with unusual emphasis or emotion.

The subject of this paper is a pilot study of data collected and reported by these methods, within a recent two-year period. The data came from six firms; all were manufacturing companies, and apparently had little in common save their concern over some aspect of their organisation or operation, to improve which they had invited the Institute's help. Two were engineering companies, two were concerned with textiles, one processed mineral fibre and one made confectionery. They differed in size of payroll, form of ownership, geographical position, age, history and tradition, arrangements of hours and shifts, degree of trade union influence, amenities, welfare provisions, and physical working conditions. The purpose of the study now reported was to see whether, in spite of these differences, similarities would be found in the spontaneous remarks made by 1,678 factory staff and operatives.

Below are summarised some of the salient points which emerged; all are treated more fully in later paragraphs.

Planning and control procedures, timing, time standards and time allowances, maintenance and stores arrangements were common topics of complaint.

Practice and policy relating to training, promotion and transfer were criticised, sometimes through ignorance, sometimes justifiably, due to acknowledged defects; but there were also instances where approval was expressed of company action in these fields.

On matters of pay, it was noted that men complained more frequently than did women about the amounts earned; but the greatest body of critical comment related to financial incentive schemes and to differentials.

In every company there were remarks about the inadequate definition of responsibility and authority; similarly, poor liaison between shifts or between departments was commonly mentioned; beside which may be set the frequent complaints about lack of information from management.

Many statements are quoted verbatim to illustrate these and other themes.

METHOD OF STUDY AND OUTLINE OF RESULTS

THE DATA

The source data consisted of reports which had been sent to the managements of the six companies. Each report contained detailed lists of statements which employees had made, and showed how many people in different departments or levels of employment had passed similar remarks. The titles and groupings of the various supervisory and managerial grades differed as between companies, but for the purpose of this study all executive grades, comprising fourteen groups of foremen, supervisors or managers, were examined together in contrast to eleven operative groups. (Sales staff, office staff and certain miscellaneous groups were excluded from this analysis.)

The numbers employed and the numbers interviewed in each company, allowing for these exclusions, are shown in Table I, page 18, which also gives the numbers of comments received. Although these last figures may have some interest, as indicating broadly the quantity of material forthcoming, they are in fact impossible to interpret because of the variety of factors which may contribute to them. Some types of work offer more openings than others, both for positive suggestions and for complaints. Workers in one group may for numerous reasons have been better able than those in another both to observe and to put into words their feelings and suggestions. Again, the interviews in two companies were conducted by one investigator and in three companies by another, while in the remaining organisation three more investigators worked simultaneously. Although it has been shown* that under suitable control this need have little effect on the outcome, it nonetheless seems possible that some interviewers may elicit rather more information than others, and that some may tend to condense more than others for reporting purposes. This is unimportant in the diagnostic study of individual situations, but it may invalidate serious comparisons between companies in terms of the number of comments

made. It is however the experience of all the Institute's investigators concerned with this work that senior executives normally have more to say than junior staff or hourly paid workers; and because they are more informative (as might be expected, considering their wider view of their organisation), it is usual to interview proportionally more senior staff than operatives. Table I illustrates these observations; but the data afforded no opportunity to measure or adjust any inter-investigator differences which may exist. It is with full awareness of such factors that limited reference will be made to the numbers of comments received; but it should also be said that scrutiny of the reports provided negligible evidence of inter-investigator differences, and that there are strong reasons for believing that in respect of this material they are minimal.

THE METHOD OF STUDY

The method of study was to look first at the number of comments falling under each main subject heading of the standard classification to discover their broad grouping; then to see whether comment was concentrated under particular sub-headings; and finally to study the content of the remarks, particularly those in the most frequented categories, or those recorded as made with unusual emphasis or emotion.

THE MOST FREQUENTLY MENTIONED SUBJECTS

The main subject headings of the standard classification are shown in Table II, A and B, page 19, which gives the average number of comments per person, by subject, for each of the fourteen executive and eleven operative groups. By this measure ORGANISATION OF WORK was clearly the commonest subject of comment by operatives and executives alike. For frequency of mention in executive groups ORGANISATION OF PERSONNEL and PAY followed closely behind, and for operative groups PAY took second place and WELFARE paralleled ORGANISATION OF PERSONNEL. It is perhaps of interest to note

*Marriott, R. and Denerley, R. A. "A Method of Interviewing used in Studies of Workers' Attitudes: I. Effectiveness of the Questions and of Interview Control." *Occupational Psychology*, 29, 1. 1955.

that COMMUNICATIONS and RELATIONSHIPS items were mentioned by executives with much greater frequency than matters of POLICY or STRUCTURE; while operative comments in all four of these last categories were comparatively rare.

Under each main heading in the standard classification are several sub-headings; the complete list is shown in Table III, page 20. Tabulation of the data from the six surveys by main heading, sub-heading, company and employee group revealed concentration of comment on particular aspects of the main subjects. The chief basis of comparison was the proportion of people in any group who made at least one adverse or neutral remark falling into a given category. (Expressions of approval were however not lacking.)

Under ORGANISATION OF WORK by far the most frequently used sub-headings were *Work Methods and Work Planning* and *Tools, Equipment and Maintenance*.

Transfer and Promotion and questions of training were commented upon by more people than any other subjects in the field of ORGANISATION OF PERSONNEL.

In the PAY category, the greatest body of comment fell under *Systems of Payment*. This was mentioned by more than a quarter of the operatives in every factory, and by over one-third of certain supervisory groups in four of them. Complaints about the amount earned were, by comparison, infrequent, and in two companies there were on the contrary some groups with little but praise for their earnings.

Shift work difficulties were mentioned by considerable numbers of people in every shift work group.

Under WELFARE relatively few people made remarks except in one company where three sub-headings were freely used by executives and operatives alike; elsewhere although the

canteen was in fact more often mentioned than any other subject in this field, relatively little was said about it.

On COMMUNICATIONS operatives had very little to say; executives on the other hand said a good deal, mainly under the heading of *Line Communications*.

Interdepartmental Relationships received critical comment from a small number of people at both levels; otherwise the few executive remarks came mainly from one company only and fell under the *Management/Management* or *Management/Supervisor* sub-headings; while operators (half of them from the same company) tended to remark on relations with supervisors or managers.

MEN OPERATIVES' COMMENTS COMPARED WITH THOSE OF WOMEN OPERATIVES

The proportions of men and women operatives making each type of comment were compared in the two companies where women's interviews were separately reported. Men expressed much more criticism than women on the limited opportunities for promotion in one firm, and on the low level of earnings in the other. Men also made many more adverse comments than did women on hours of work, shift arrangements and rest pauses. In both companies women said more than men about cloakroom facilities; and in one company complaints about the quality and distribution of material (admittedly poor) came twice as often from women as from men who did the same work but at night. On timekeeping and absenteeism there were marked differences within each of the two companies in the volume of comment recorded; but in one case it came primarily from men, and in the other from women.

WHAT PEOPLE SAID

That relatively clear focal areas emerge from mere counting may be not without significance, particularly if the variety in size, circumstances and conditions of the six companies be recalled. More interesting, however, is the content of what was said.

POLICY AND STRUCTURE OF THE ORGANISATION

Few remarks, even from management levels, were classified under the policy heading, except in one company whose unusual ideas and practices relating to staffing were subject to a good deal of criticism as well as noticeable (though less frequent) praise.

Every company produced some complaints referring to organisational structure and more specifically to inadequate definition of responsibility and authority; in two instances those came from as many as one in four of the executives; but the volume of direct criticism or suggestion was infinitesimal except in particular circumstances which also provoked remarks on concrete conditions or personal experience which are classified elsewhere.

ORGANISATION OF WORK

While of the many different things said under this heading the majority were mentioned by a few people only and referred to specific jobs or circumstances, there were none the less certain topics on which many people in different companies remarked, often with emphasis: for example, planning and control procedures, timing, time standards or time allowances, and the availability and condition of raw materials and other supplies, and the maintenance of tools and equipment.

Comment on the defects of *planning and progressing* came from as many as 59% and 39% of the executives interviewed in two companies and from 26% of the operatives in one of these, and remarks in similar strain were made by smaller numbers of both executives and operatives in all the other companies.

The following are examples of statements made in this connection,

“More forward planning needed; company out of step in overall programming of new models; trials sometimes run on production line, etc.”

“Work held up because of shortages. No stock of parts. Material should be ordered well in advance. Operator irritated by waiting.”

“Progress department poor—not doing their job—system too rigid—dates should be realistic.”

“Planning often incomplete. Approximate dimensions are given—useless; equipment and material delayed. Should consult fitting shop more often.”

“Programme keeps changing according to order book—makes for inefficiency.”

“Changes too frequent—often from one run to another and back again in very short time—uneconomical—results from poor planning.”

“If we could run off banks of stock in advance less setting time would be needed.”

“Could changes in design be stored and periodically incorporated in new models instead of making frequent small changes which are unsettling.”

“Stores system falling down; stocks run out; things stored around factory get lost, etc.”

“Construction department does not know what jobs have gone to contractors and when they are due back.”

“Standard methods hardly ever transferable from research to main plant—different conditions.”

“Suggest weaving a greater length for stock of popular lines which can be cut up for orders. Too many short lengths woven at present.”

Time and time allowances were common issues, particularly in two factories where they

had been recently introduced, and they were apt to be mentioned with a good deal of feeling.

“Timing of jobs is too strict. No allowance for fetching, cleaning, etc. Quality must suffer as a result.”

“Work study results in loss of earnings—pay is always cut after job has been timed. Main function of Work Study Dept. is to prevent men from earning too much.”

“Introduction of work study is upsetting morale. Workers feel very disturbed. Most unpopular, a major grievance, will cause trouble.”

“Should keep to standard allocation—if you reach it it is raised to breaking point.”

“Machines speeded up as soon as running well, but no extra money.”

“Operative doesn’t have time to do quality check—also he is paid on output so he isn’t interested.”

“Bonus means quantity and speed rather than quality.”

“If bonus were based on output of grade one goods, then everyone would benefit and quality wouldn’t suffer.”

“Speeding up machines results in poor quality.”

“Hardly any operator works standard practice. It would be impossible to keep machines running or earn decent bonus.”

“Not given decent time to do engineering jobs; assessors don’t know the jobs, tie men down too tightly.”

“Time and motion people come round when you’re not busy—ought to base times on full shift, not just on beginning when man is fresh.”

“More time needed for setting. Standards department reluctant to allow more but allowance is often exceeded.”

The things with which people work—*materials and components, tools and equipment*

—and their *maintenance* occasioned comment from many people: 19% of all the operatives interviewed and 11% of all the executives. The former made .32 comments a head on these subjects as against .28 per head from executives, averaging all groups. In spite of inter-company differences, two types of comment occurred in each of the six factories: the one relating to apparent shortages of tools or materials — attributable perhaps to faulty planning and already touched upon in that connection, or perhaps to inadequate stores or stock systems—the other relating to maintenance. It was often said that

“Poor maintenance results in frequent breakdowns . . . bad rollers, cylinders out of true, settings hopeless, screws missing—tied up with string and wire . . . poor men selected—should employ trained engineers, . . .” etc.

“Maintenance is done only for breakdowns; should have regular schedule” . . .

“Maintenance should be improved—inadequate at present—usually wait until a machine breaks down. Suggest regular inspection. Summer shut down should be as complete as possible to allow maintenance to do a proper job.”

“Maintenance unplanned. Machines run until they break down. Ought to be checked weekly.”

“Maintenance not adequate. Only two tuners and they have to rush because of bonus.”

“Repairs to building and equipment could be attended to more quickly . . . have to wait . . .”

ORGANISATION OF PERSONNEL

Remarks on *selection* came from only a few people (55 executives, 28 operatives) in all. In three medium-sized companies statements tended to relate to work difficulties or staff shortages which, it was suggested, could be improved by more careful selection; while in

two large companies with highly developed personnel procedures there were criticisms of certain details of existing practice, or mentions of individual adverse experience. The following remarks were made with strong feeling:

“Good reception but little interest shown afterwards. No follow up. People feel lost.”

“Selection should be more careful—stricter—time is wasted taking on people who will never be any good—personnel department should reject the grossly unsuitable, . . .” etc.

Training, on the other hand, was mentioned by 24% of the executives interviewed, and 11% of the operatives. In three companies, where normal practice included a certain amount of training, appreciation was expressed by as many as one-third of those operatives who raised the subject at all; other remarks from these companies took the form of suggestions or criticisms, usually by a few people only, but on a wide range of aspects. In the other companies where training was not organised or was limited to T.W.I., it was said that more was needed. Representative remarks are given below.

“No real training in the job—especially for new machine men—never see beyond own little job.”

“No training or education for foremen. Training for supervision is needed both technically and in leadership.”

“Training inadequate. Newcomers, particularly foreign workers, are left to pick up the job.”

“Trainees should be more gradually introduced to work.”

“Methods should be standardised—different instructors give different information.”

“Training should include more theory.”

“Training should be followed up more carefully. Suggest giving trainees more help,

even after first . . . weeks. Many become discouraged at present.”

“Some teachers have insufficient experience.”

“Potential chargehands should be given T.W.I. training before promotion; also should act as chargehand when latter is absent. Technical training should be given.”

“T.W.I. principles not practised. Trainer should come round to see that methods are applied.”

“Company inclined to let a man stagnate. Should give more opportunities to broaden knowledge and experience and to obtain a more general view of different functions of management . . .” etc.

“Trainee managers should spend more time in the operative, leading hand and supervisor stages—do practical work themselves.”

“Job training theoretically all right but not in practice because supervisors are too busy and experienced operatives have to look after their own jobs. New girls are left to pick up what they can. Should have special instructors.”

“Training courses very good, appreciated.”

“Follow-up of training is inadequate—little or nothing comes out of courses—principles learned are never used.”

“Training by skilled men inadequate. Apprentices left on their own too much. Period of three months in a section is too short—should have at least six months.”

“Basic week’s training very good. Get to know whole factory, makes own job interesting. Wonderful feeling built from training section—but somehow it disappears on the shop floor.”

Promotion—policies, practices, or prospects—aroused comment from 30% of the executives and 22% of the operatives interviewed. One

aspect evoked similar statements from every firm in the sample: it was felt by executives and operatives alike that promotion should whenever possible be given to existing employees in preference to engaging staff from outside. Thus:

“Promotion should be from within. Supervisors and management trainees from outside should not be necessary. Feel employees have no chance of advancement.”

“Promotion to foreman ought to stay within the company. Company takes foremen from outside rather than promote chargehand, so chargehands feel discouraged.”

“Promotion not from within. Can’t go beyond foreman. Vacancies above shift supervisor all filled from outside. For non-technical appointments first consideration ought to be man in factory, from shop floor.”

“During last two years all vacant posts at executive level have been filled with outside men—causes frustration. Should bring in specialists however.”

“Promotion from within should be practised. Chargehands and foremen are brought from other sections which should happen only when no suitable candidate is available within the section.”

Sometimes this opinion was expressed by reference to special classes of appointment as in the following remarks which were made with strong feeling by unusually large numbers of both operatives and executives in one company.

“Disapprove the appointment of university graduates; they have no experience, are carried by leading hands; are bad at handling people.”

“No chance for people without degrees—other qualifications, e.g. City and Guilds, not recognised.”

“Appointment of high powered people from outside causes frustration . . .” etc.

“University and height complex.”

On the other hand there were not entirely lacking instances of praise for good promotional opportunities:

“Promotion is good, fair, open, hard to beat. Pleased to see foreman considered for promotion. Every man gets opportunity if he can do the job.”

“Promotion from within is good, fair, open to all. Satisfied.”

“Promotion is satisfactory—good and fair. Have a chance to get on if prepared to work hard. Like group selection procedure. Good to find a place where promotion is not based on seniority.”

It was held by some that seniority did not count enough:

“Seniority should count more. No system of seniority. Promotion should be based on seniority and efficiency.”

Others thought that the difficulty was rather “to get the right men because loss of pay may be involved initially.”

The remaining statements on the subject of promotion referred to unfairness, favouritism, the need for care and system (for example, merit rating), especially in selecting foremen; and for clarification of policy.

“Favouritism towards those who held rank in the Army or know a foreman. Men who have been on shop floor for some time have no chance of promotion—seniority doesn’t count, nor does ability and experience—‘your face has to fit’. Young men promoted over man with service and capability. Ought to be a test—some kind of Civil Service exam. and interview—not by local supervision.”

“Promotion by favouritism. Depends on who you know.”

“Not done fairly by merit.”

“Promotion policy not always fair. Not enough emphasis has been laid on human

relations when appointing supervisors. Selection of supervisors should be more careful.”

“Selection of supervisors should receive more attention. Job relations course will not make an unsuitable man suitable. Suggest reports on operatives be sent to manager to help him make promotions with greatest care.”

“Promotion should be on merit, ability.”

“Men are promoted without knowledge and experience of job—some chargehands incompetent.”

“Supervisor must know job — theory and practice—promotion should be from within department, and only if expert.”

“Promotion policy not clear—hazy. Should be explained. Notice on board does not give sufficient information. Are people promoted on service? efficiency? favouritism? yes men? Are skilled men too useful in their job to promote? Are men promoted because not good enough for operatives’ job?”

“Promotion policy vague—company has a policy but it isn’t in practice. Never hear of promotion jobs. Don’t know the system—unwieldy.”

“Promotion policy not clear—rumours and hearsay but nothing concrete—no policy of management succession — no deputisation—no notice taken of seniority and qualifications — no established line of promotion — was told it went foreman, acting supervisor, shift supervisor, but find it has changed—don’t understand it.”

Only sparse reference was made to *transfers*; the following examples, however, evoked strong feeling :

“Applications for transfer (on account of health) refused. Often no reason given.”

“Transfer to better job should be allowed to present employees; often new people get the good jobs.”

Otherwise the remarks on transfer might be characterised by the following (sometimes contradictory) quotations.

“Could people be changed around within factory? Some jobs get monotonous.”

“Transfer from night shift to day shift and vice-versa should be considered. At present we are just told ‘impossible’.”

“We should have the chance to transfer and learn new jobs after a reasonable period.”

“Transfer to replace absentees causes discontent.”

“Many long service people want to stay on same job, but they get moved and newcomers remain undisturbed; e.g. transferred man could not stand it physically and was sacked.”

“There seems to be a plan in transfers—would like to know what scheme is and where people will land. Changes are made but people are not told why.”

“Too much moving about—can’t get to know men in time—have to start all over again.”

“More notice than a couple of days wanted—secrecy—not told until last minute.”

PAY

Comment on *rates of pay* and *amount earned* came from all but two of the twenty-five groups of executives or operatives interviewed. In only six groups, however, was this aspect mentioned by substantial proportions (i.e. one-third or more), and in an equal number of groups it was mentioned with praise or satisfaction by at least half and sometimes all of those who raised the topic at all. Complaints are exemplified by the following, which were made with strong feeling:

“Overall rate very low; not enough for the hours we work; underpaid; dissatisfied . . .” etc.

“We need a cost of living rise; if it weren’t for weekends we’d get a woman’s wage.”

“Chargehands should earn more. Should compare more favourably with other industries. Rates should be reviewed.”

Against these may be set favourable remarks such as :

“Pay high. People satisfied, both management and operatives. Reason for people staying . . .” etc.

“Basic pay all right, reasonable, very good. Satisfied.”

(The last of these quotations comes from the same company as the first above.)

Systems of payment, including remarks about incentives, allowances and differential rates, constituted the greatest body of material in the pay categories. They were mentioned by at least 25% of operatives in five factories and by 21% in the sixth and by anything from 18% to 43% in nine of the fourteen executive groups—22% of all the executive and supervisory staff interviewed. (One company was in process of introducing a bonus scheme while the survey was in progress; this does not appear to have increased the amount of executive comment, which is low in comparison with other companies (18%, compared to 16, 25, 29, 40 and 42%); but it may in some degree account for the relatively high number of operatives who commented (52%, as against 57, 40, 29, 29, and 21%).) It was commonly said that bonus was too difficult to earn, while on the other hand some people feared to give maximum output lest the bonus rate would be reduced.

“Bonus for time workers should be introduced (but controlled so as to be less than piece earnings in subsequent dept.). Reduced labour turnover would result.”

“Would like individual bonus that permits recognition of harder work.”

“One man can pull down bonus because he slacks during day to get overtime later.”

“Suggest a fixed bonus with extra for production above a stated amount.”

“Bonus scheme should be abandoned—

encourages shoddy work and personal jealousies.”

“Price for the piece is fixed by the two fastest workers—not fair on other girls—difficult to earn bonus.”

“Profit sharing scheme should be introduced—would provide real incentive.”

“Profit sharing scheme wanted, similar to other big industries. Prefer it to bonus.”

“Co-partnership scheme not often paid out and then quite small.”

“Incentive bonus disliked. As allocation of work rises so should incentive but it doesn't. Easy money when work runs well, hard to make it when work runs badly. For amount of work done, bonus could be better.”

“Time study department views any high bonus with suspicion. If we find an easy way of doing something up goes the bonus and down comes Time Study with the clock. Fear of speeding production in case bonus is cut—leads to restrictive practices.”

“Used to receive bonus but it stopped—do not know why—operatives still get one.”

There were suggestions that *holiday pay* should be reckoned on average earnings rather than on base rate, and others concerning *allowances* for poor material, waiting time and overtime. Complaints about *compensation for week-end work* came with consistency and emphasis from operatives in one of the five companies on a continuous process of manufacture, and from managers in the other.

“Waiting time—if due to machine breakdown or shortage of material—should be paid. We are not paid for any stoppage of less than an hour, but may have two or three waiting periods of 30 minutes in a day.”

“Waiting time should be paid at average bonus rate, not day rate.”

“Holidays should be paid at bonus rate—base rate unrealistically low.”

“Holiday pay should be based on whole year’s earnings, not only twelve weeks before leave.”

“Pay system should provide for compensation to operatives who have to work on poor quality material.”

“Payment for Saturday afternoon ought to be double time.”

“Payment for working week-ends not sufficient to compensate for loss of social life.”

“Shift allowance for managers is a fixed amount while operatives get percentage: thus some operatives get more than managers.”

Specific *differential payments*, in the view of many small groups, failed to accord with the skill, or inconvenience, of the work in question; or, in the case of supervisors, with relative responsibilities and status, e.g.:

“Lack of differential between foreman and chargehand leads to dissatisfaction—chargehand can get more than foreman—lowers prestige. Wider margin needed—differential must be maintained . . . ” etc.

“Supervisors should have higher pay—frequently earn less than man on shop floor.”

“Skilled man/labourer differential is too small. Labourers can earn almost as much as skilled man. Skilled men should earn more than unskilled.”

“Comparative rates between jobs — unskilled get same rates as skilled, e.g. loaders same as checkers, cleaners same as assistant printers—dissatisfaction rife.”

“Some men acting as leading hands, not being paid for it, others being paid full, others half rate.”

“Job undervalued considering poor conditions.”

“Rates for hopper fillers too low. Heavy

dirty unpleasant job—but girls on piece work earn more.”

Finally, there were a certain number of remarks on the alleged *secrecy of salary scales*, and on the complicated nature of the pay or bonus system.

“Pay system too complicated—not understood by most people —should be simplified. Chinese to me. Would like a system we can understand.”

“Pay system is not understood—changed frequently—should be explained to us.”

“Bonus assessment not made clear. Many people feel system is not quite fair.”

“Bonus system—how does it work? Suggest more details on pay card—too complicated to reckon own wages—ought to be simplified.”

“Salary scale—would like to know starting salary and ceiling—not indicated when promoted—don’t know where we are—salaries should not be kept secret.”

HOURS AND HOLIDAYS

Hours were seldom criticised except in respect of the *week-end shift work* which was normal in two factories, and which was disliked on account of its interference with normal social and family life. (See Table IV, page 12.)

“Week-end shift hours hard on operatives—bad for social and family life—would like occasional week-end or Saturday or Sunday off.”

“Would like a full week-end off a month—never get one now.”

Though shift work, together with regular night work, occasioned a number of other remarks, they were often contradictory.

The few remarks about *overtime* were divided between complaints that it was unnecessary or excessive and suggestions to equalise the opportunities it offered for extra earning.

TABLE IV

NUMBER OF PEOPLE COMMENTING ON HOURS

COMPANIES WORKING SHIFTS			COMPANIES WITH REGULAR DAY WORK		
	NO. INTERVIEWED	NO. AND % COMMENTING ON HOURS		NO. INTERVIEWED	NO. AND % COMMENTING ON HOURS
<i>Operatives</i>			<i>Operatives</i>		
Company A ..	361	163 45%	Company C ..	113	12 11%
Company B ..	371	169 45%	Company E ..	84	14 17%
Company D (Nights)	46	10 22%	Company D (Days)	103	15 15%
			Company F ..	59	33 56%
TOTALS ..	778	342 44%		359	74 21%
<i>Executives</i>			<i>Executives</i>		
Company A ..	141	55 39%	Company C ..	58	3 5%
Company B ..	114	44 39%	Company B ..	116	9 8%
Company D (Nights)	16	9 56%	Company D (Days)	24	4 17%
			Company E ..	57	9 16%
			Company F ..	15	10 67%
TOTALS ..	271	108 40%		270	35 13%

“Too much overtime working; some of it unnecessary; Company would get more work from men if overtime were worked on Saturday morning when men are fresh rather than after nine hours day work . . .” etc.

“Allocation of overtime unfair. Foreigners seem to be favoured. Rosters should be introduced.”

Some executive groups felt strongly critical of restrictions on the time and length of holidays permitted, and similarly operatives were irked by difficulty in arranging ‘lieu days’.

“Holidays should be left to discretion of Department Head. Restrictions irksome. Can’t take odd days. Ought to be able to take holidays as you like . . .” etc.

“Lieu days—can’t get them off when you want them.”

Otherwise most comment, unless concerned with special circumstances, related to details of meal breaks.

“Longer dinner break wanted—suggest an hour.”

“Should be an official tea break in works.

Supervisors could then exercise control of personnel.”

WELFARE

Although a works *canteen* is often expected to prove a major focus of unfavourable and perhaps unwarranted comment, the impression formed from study of this material is quite otherwise, except for one company. Omitting the exception, only about one-quarter of the operatives and one-fifth of the executives made any remark at all concerning canteen matters; and they averaged only one comment per head. Compared to certain categories already discussed under organisation of work, organisation of personnel, and pay, these numbers are rather small. In one company a high proportion of praise counter-balanced the adverse remarks. Besides, complaints did not form any clear pattern; often they related to details such as the provision of particular items; sometimes they were in more general terms, criticising the nature or monotony of the menus offered, or the time spent in queueing for food.

The remaining company, whose volume of comment per head on this subject was five times as great as in any of the other four large or

medium-sized companies, produced similar strictures, expressed by many people and with strong feeling; but in addition it was said there that in respect of canteen service shift workers were neglected as compared with equivalent day work employees, and vigorous criticism was directed at the behaviour of the canteen staff.

“Shifts get bad food—neither fresh nor hot. Three grades of service; dregs to night shift, medium to day shift, good to 1 p.m. day workers . . . ” etc.

“Variety worse on shifts than at midday, both for main courses and snacks.”

“Service aggressive, insulting, abusive to managers in front of staff and visitors—customer always wrong—factory exists for sake of canteen.”

Other welfare provisions were relatively seldom mentioned except in specific instances of praise or censure. Overcrowded or ill-maintained *cloakrooms* or failure to supply *protective clothing* were occasionally criticised in every factory. Social activities and employee pension and sickness benefit schemes were warmly commended.

“Approve social activities—company do all they can—nothing too much trouble.”

But such praise was sometimes accompanied by statements about the difficulty of understanding the benevolent schemes :

“Difficult for people to understand—regarded with suspicion—do not realise how good it is—do not know how much they contribute.”

“Pension scheme a good thing; ought to be more fully explained, e.g. what happens in event of death at 67 or 68?”

There was criticism of certain aspects of appreciated provisions—e.g. in the instance just quoted, its compulsory nature; or

“Should have permanent qualified service in First Aid Room—can’t get professional treatment under present arrangement.”

It is perhaps of interest to note that the strongest pleas for improved welfare of any kind came from a company whose standards in these respects were already high :

“Sick benefit scheme for operatives needed—with suitable precautions—contributory—with qualifying period.”

COMMUNICATIONS AND RELATIONSHIPS

The statements classified under COMMUNICATIONS were in the main critical of the passage of information up, and particularly down, the line of command. 36% of all the executives interviewed raised issues relating to *line communications*. Only in one company with unusual features in this respect was joint consultation a more frequent subject of comment.

It was common for as many as one-third of the interviewees in executive groups to complain about a lack of information from ‘management’.

“They know what they’re doing but don’t tell anyone else.”

“Often changes affect a number of people who are not told about them.”

“Vertical communication shocking.”

“Lack information about new factory. What is the reason for it? Who is going there? Are we going to shut down? Suggest a meeting after hours to tell us about it and cut out rumour.”

“Communication from management poor. Should be more contact with the upper ten. Supervisors can’t communicate with senior management.”

It was further said by executives that information reached them from the wrong direction.

“Everyone has to have his own intelligence service—juniors tell seniors.”

“Shop stewards know before we do; supervision not in the picture enough.”

Such observations in some cases explicitly referred to *status* :

“In pay and union matters junior supervision tend to get information from shop floor—feeling of loss of status—shop steward had copy of wages structure, we hadn’t so couldn’t answer questions on wages; shop floor knew of holiday arrangements before supervision did . . . ” etc.

Another executive complaint, strongly voiced in one company, was:

“Don’t know if doing well or badly—feel insecure because only learn how one is doing if one asks. Criticism at the right time would help. Need guidance about success and failures and help to become more competent technically.”

Operatives’ remarks on communications were much less frequent than executives’; (only 51 operatives—4%—said anything about line communications, the commonest aspect of this subject, as against 197 executives—36%); but sometimes they were made with strong feeling:

“They don’t tell us enough. No one to explain company’s point of view and give the lie to rumours. Should speak to operatives once a month and put them in the picture; let the men know what’s expected; make them part of the organisation . . . ” etc.

“Company should have told us the reason for dropping the job rate.”

“No reason given for stopping barley water supply, etc.”

“Grievances never get beyond the foreman’s office; don’t reach management. Approach to higher management should be easier.”

Perhaps it was to be expected that operatives would express themselves more freely in terms of personalities, or relationships, discussion of which follows.

Comment on RELATIONSHIPS came from every factory, though no more than 25% of all the executives or 18% of the operatives interviewed made statements falling under any one sub-heading. The need for better liaison

between specified departments was commonly mentioned, and also defects in co-operation between shifts:

“Poor co-operation between Production and Maintenance Engineering. Maintenance don’t refer enough to production and have to modify their work. Production managers harry maintenance staff. Fitters feel blamed for everything.”

“Lack of co-ordination and co-operation between departments. Too much selfishness and ‘buck passing’.”

“Labour office doesn’t support supervisors in disciplinary matters. Unions too powerful—all kinds of appeasement. Foreman has no authority now.”

“Not enough co-operation between shifts. One always leaves more bad work than others. One always works harder so gets left to clear all rubbish. Ought to leave place tidy for next shift. Too much sharp practice.”

“Inter-shift co-operation does not exist. ‘Leave it to other shift’ attitude. One thing leads to another — conditions deteriorate.”

“Management remote, inaccessible, impersonal, don’t seem interested; we never get to know them, they should walk through the shop and talk to people, could be warmer, more friendly, put on a smile; an occasional personal ‘thank you’ would boost morale considerably.” So run remarks from five of the six companies in the sample. Sometimes criticisms were specific and emphatic, like the following, one from each company; they were made mainly by operatives and refer to supervisors:

“Supervisors miserable, never smile, never praise.”

“Supervisors take very little interest in their work or the people under them.”

“Supervisors are not approachable; they are dictatorial, have no respect for workers.”

“Supervisors unsympathetic, rude, discouraging.”

“Foremen push you around, have little idea of managing men, not helpful if you complain about quality.”

“Chargehands always picking on operators.”

But praise was also recorded, for example:

“Our manager deserves promotion—very friendly—you are treated as a person not a number.”

Amongst the remarks of greatest importance are workers' allegations of supervisors' incompetence; it was said in four companies that they lacked technical skill, knew less than their operatives, should never have been promoted.

Relationships between different levels above the operator grades were sometimes characterised by statements like the following:

“Manager-supervisor relations could be improved with more contact, and if senior management would give credit where it is due.”

“Gap between executives and supervisors too wide—executives don't know what goes on.”

“Top management remote — enthusiasm needed, also recognition.”

“Management not in touch with supervisors on shop floor.”

“Not enough praise or reprimand; no way of knowing how you are doing. Management should let men know how they stand.”

But as at operator level, so also at executive level; besides criticism there were assertions that relationships were good:

“Higher management come and talk to me—foremen consulted — no complaints — nice to see them—creates a good impression.”

Other points which were mentioned only in individual companies but in each case with considerable emotion were: staff-works relationships; relations between shifts, and between shift workers and day workers; the practice of 'searching' employees to discourage pilfering, remoteness of personnel department and attitude of other management representatives to their subordinate grades; and failure to recognise long service and loyalty.

In concluding this discussion of remarks on relationships, it must be re-emphasised that while doubtless they refer to actual situations as experienced by the interviewees, this is not to say that they represent the overall attitudes and relationships in the six companies under review, much less of industrial relationships in general. They are merely pointers to suggest directions in which, in the interviewees' opinion, improvements might be made in their own companies.

PHYSICAL CONDITIONS

The one feature of physical conditions mentioned with consistent regularity was *ventilation*. Requests often related to specific rooms, processes or machines; complaints were commoner about stuffiness than about draughts, and related even to some premises that were air conditioned.

The general standard of tidiness and cleanliness was not infrequently said to need improvement, but on the other hand, good conditions of every kind were mentioned with appreciation.

DISCUSSION

The data from this review do not support generalised conclusions and statistical tests; nor indeed were valid generalisations to be expected when it is recalled that the main common feature of the six companies was having appealed to the Institute within a given period of time, and that differences in size alone were such that the largest employed twenty-five times as many people as the smallest. It is striking that in such a small and varied sample certain areas of employee experience were repeatedly targets of adverse comments; matters affecting control or facilitation of work, for example, and others relating to personal development, opportunity and recognition. If it is true that some subjects are easier to speak about than others (for example, one might expect workers to say more about the work itself than about company policy) it is also true that as between companies any one topic (such as pay, or physical conditions) will sometimes merit complaint and sometimes nothing but praise; and where spontaneous comments from diverse sources focus on the same subjects, the signals for managements seem clear.

It may be of interest briefly to relate this material to that collected in the course of two independent and very different British studies of attitudes to factory work.

Wyatt and Marriott and their colleagues of the Group for Research in Industrial Psychology (Medical Research Council) interviewed close on 1,000 men in three factories within a five-year period*. Using a carefully controlled method, they questioned the men on a wide range of topics germane to the actual work on which they were employed, including wages, security, chances of promotion and relationships with other workers, supervisors, and managers. Their results agree with our own about common subjects of adverse comment, such as defective machines and materials, interrupted work flow, and unsatisfactory timings for establishing bonus or piece rates; and about sources of satisfaction such as feeling there is a good

chance to "get on". Other satisfactions with which (by inference) our own observations seem consistent relate to the exercise of skill, to reasonable security and achievement in work, and to the social contacts and economic rewards that factory work provides.

Another study, this time of women's attitudes to repetitive work, was made by Cox, Dyce Sharp and Irvine of the National Institute of Industrial Psychology*. They interviewed 160 women in six factories by a method which was also rigorously controlled, while at the same time permitting to interviewees both the selection of subjects for comment and the determination of how much to say. As every spontaneous remark was noted and classified, the volume and nature of comment on different aspects of work could be examined. A large proportion of the women spoke of their dislike for any hold-up in the flow of work, and such statements were as frequently made by workers at time rates of pay as by piece workers. These respondents clearly liked to "get on with the job", expressing marked preference for the feeling of having plenty to do, while at the same time they disliked having any given pace of work imposed upon them. Indeed, the effect upon workers of constraints due to layout or other conditions of the job was borne in upon the investigators as a matter of significance. The sense of being to some extent in control of the work situation seemed likely to prove an important source of satisfaction.

These observations insistently recurred to mind during the re-examination of six employee attitude surveys now reported. Criticism of the quality of tools or materials, or of the maintenance of equipment makes sense only in relation to a desire to get on with a job of work; (the possible exceptions, other than the pay motive, are negligible; and in the N.I.I.P. study quoted above, that one was shown to be relatively unimportant to the women concerned). Shift hours, particularly when they necessitate week-end work, are an obvious

*Wyatt, S. and Marriott, R. *A Study of Attitudes to Factory Work*. Medical Research Council Special Report Series No. 292. H.M.S.O. 1956.

*Cox, David. *Women's Attitudes to Repetitive Work*: N.I.I.P. Report 9, 1953.

form of constraint — and in the present data they were the most universally and vigorously criticised feature of the environment wherever they occurred. Complaints about transfers and promotion, and about unfairness in matters of pay, may be expressions of unease in face of constraint of a special kind; either direct frustration of ambition to “better oneself”, or failure to see in the job scope for development, or

adequate purpose and direction: the feeling of being in a rut whose edge is too high to see over, whether or not one has in fact attempted to get out of it. To draw such conclusions solely on the basis of the present study would be unwarranted; but to say that it offers support for suggestions of this type seems justifiable.

CONCLUSION

Two final points may be mentioned. The material presented in the foregoing review of over 11,000 comments made by nearly 1,700 employees in six companies may serve the following distinctive purposes. In the first place it indicates the range and kind of information or suggestion which may emerge from surveys carried out by the Institute's confidential unguided interview method, and shows the aspects of working life on which employees may offer the greatest numbers of critical or constructive remarks. Secondly, while it shows some tendency to consistency between companies in respect of the kinds of comments that have been made, there are nevertheless exceptions to be noted under many of the subject headings; that these exceptions are clear

indicates the value of the method in laying bare distinctive, perhaps irritant, conditions whose adjustment may lead to more harmonious or more effective working.

It is impossible in a brief survey of so few companies whose anonymity must be preserved to show the undoubted relationship between remarks from different groups within any company, and between remarks which have been classified under different headings. These relationships, even more than the representative statements such as have been quoted above, are the guides to more exact diagnosis of the circumstances within a particular company, and to consequent recommendations about future action.

TABLE I

NUMBER EMPLOYED, NUMBER INTERVIEWED, AND
NUMBER OF COMMENTS PER PERSON BY COMPANY

EXECUTIVE GROUPS					OPERATIVE GROUPS				
	APPROX. NUMBER EMPLOYED	NUMBER INTER- VIEWED	NUMBER OF COM- MENTS	COMMENTS PER PERSON		APPROX. NUMBER EMPLOYED	NUMBER INTER- VIEWED	NUMBER OF COM- MENTS	COMMENTS PER PERSON
Company A Managers & executives Supervisors	131	114			Company A Men	1360	264		
	27	27			Women	535	97		
Total:		141	1533	10.9			361	2433	6.7
Company B LINE EXECS. MAIN PLANT Managers & supervisors Foremen OTHER STAFF Managers & executives Junior execs.	41	41			Company B Men	3080	371		
	73	73							
	150	32							
	400	84							
Total:		230	1553	6.8			371	2239	6.0
Company C Managers & executives Supervisors	30	30			Company C Men & Women	725	113		
	40	28							
Total:		58	397	6.8			113	535	4.7
Company D X DEPT. Managers & supervisors (day) Managers & supervisors (night)	17	17			Company D X DEPT. Men (day) Women (day) Men (night)	68 220	23 50		
	16	16							
		33	303	9.2					
	Y DEPT. Managers & supervisors	7	7						
		7	26	3.7					
Total:		40	329	8.2			149	727	4.9
Company E Managers & executives Supervisors	19	15			Company E Men	470	84		
	43	42							
Total:		57	528	9.3			84	646	7.7
Company F Managers & supervisors	15	15	82	5.5	Company F Men & Women	170	59	322	5.5
Grand Total:		541	4422	8.2			1137	6902	6.1

TABLE II

SUBJECT OF COMMENT BY AVERAGE NUMBER OF COMMENTS PER PERSON

A. Average number of comments per person—14 executive groups

SUBJECT	0	.01- .49	.5- .99	1.0- 1.49	1.5- 1.99	2.0- 2.49	2.5- 2.99	3.0- 3.49	3.5
General Policy ..	XX	XXXXX XXXX	XXX						
Structure of Organisation	X	XXXXX XXXXX	XXX						
Organisation of Work		XXXXX	XXX		XX		XX	X	X
Organisation of Personnel			XXXXX XX	XXXX	XX		X		
Pay		X	XXXXX	XXXXX XX	X				
Hours and Holidays ..	X	XXXXX X	XXXXX X	X					
Welfare		XXXXX X	XXXXX X				X	X	
Communications ..		XXX	XXXXX X	XXX	XX				
Relationships		XXXX	XXXXX XXX	X	X				
Physical Conditions ..	X	XXXXX XXXXX XX	X						
External Conditions ..	XXXXX XX	XXXXX XX							

B. Average number of comments per person—11 operative groups

General Policy ..	00000 0	00000							
Structure of Organisation	00	00000 0000							
Organisation of Work		00	000	0000	0		0		
Organisation of Personnel		0	00000 0000	0					
Pay		0	00000 0	000	0				
Hours and Holidays ..		00000 000	000						
Welfare		00	00000	00			00		
Communications ..	00	00000 000	0						
Relationships	0	00000 0	0000						
Physical Conditions ..		00000 00	0000						
External Conditions ..	00000	00000 0							

TABLE III

MAIN HEADINGS AND SUB-HEADINGS IN STANDARD CLASSIFICATION

GENERAL POLICY

STRUCTURE OF ORGANISATION

1. *Hierarchy.*
2. *Definition of responsibility and authority.*

ORGANISATION OF WORK

1. *Materials and components.*
2. *Tools, equipment and maintenance.*
3. *Work methods and work planning.*
4. *Management and efficiency of section.*
5. *Layout and transport.*
6. *Production control.*
7. *Inspection and quality control.*
8. *Attitude to task.*

ORGANISATION OF PERSONNEL

1. *Recruitment, selection and engagement.*
2. *Induction, training, education.*
3. *Utilisation of personnel.*
4. *Transfer and promotion.*
5. *Security and stability, labour turnover.*
6. *Timekeeping and absenteeism.*

PAY

1. *Amount earned.*
2. *System of payment.*
3. *Discrimination or inequity.*

HOURS AND HOLIDAYS

1. *Length, shifts, rest pauses, etc.*
2. *Holidays and other leave.*

WELFARE

1. *Canteen.*
2. *Medical and first-aid.*
3. *Cloakrooms, clothing, laundry.*
4. *Social and recreational activities.*
5. *Pension scheme, provident or sick fund, etc.*
6. *Safety—occupational hazards.*

COMMUNICATIONS

1. *Joint consultative meetings.*
2. *Line communications.*
3. *Procedures for grievances and appeal.*
4. *Suggestion scheme.*
5. *Magazine, posters, broadcasts, etc.*

RELATIONSHIPS

1. *Interdepartmental.*
2. *Management / management.*
3. *Management / supervisor.*
4. *Management / worker.*
5. *Supervisor / supervisor.*
6. *Supervisor / worker.*
7. *Worker / worker.*
8. *Union / management and supervisor.*
9. *Union / worker.*
10. *Individuals.*

PHYSICAL CONDITIONS

1. *Building, heat, light, ventilation, seating.*
2. *Housekeeping.*

EXTERNAL CONDITIONS

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY

Officers and Council

President:

THE RIGHT HON. LORD PIERCY, C.B.E., B.SC.

Vice-Presidents:

GENERAL SIR RONALD FORBES ADAM, Bart., G.C.B., D.S.O., O.B.E.

SIR ALEXANDER M. CARR-SAUNDERS, K.B.E., M.A.

SIR ROBERT ROBINSON, O.M., M.A., D.SC., LL.D., F.R.S.

Chairman: THE RIGHT HON. THE EARL OF HALSBURY, F.R.I.C., F.Inst.P.

Vice-Chairman: J. H. MANN, M.B.E., M.A., F.C.A.

Council:

GENERAL SIR RONALD FORBES ADAM,
Bart., G.C.B., D.S.O., O.B.E.
*R. A. BANKS, B.A.
*SIR FREDERIC BARTLETT, C.B.E., D.SC.,
D.PHIL., D.PSYCH., M.A., F.R.S.
J. O. BLAIR-CUNYNGHAME, O.B.E., M.A.
SIR HAROLD BOWDEN, Bart., G.B.E.
*R. BOYFIELD, M.A.
SIR CYRIL BURT, D.LITT., LL.D., D.SC.
*JAMES DREVER, M.A.
*G. C. DREW, M.A.
*R. J. M. GOOLD-ADAMS, M.A.
J. P. HALPIN, LL.B.
*THE RIGHT HON. THE EARL OF HALS-
BURY, F.R.I.C., F.Inst.P.
SIR JOHN HANBURY WILLIAMS, C.V.O.
D. W. HARDING, M.A.
*SIR FREDERIC HOOPER, B.SC.
LI. WYNN JONES, M.A., PH.D., D.SC.
*H. G. KNIGHT
C. A. MACE, M.A., D.LIT.
*J. H. MANN, M.B.E., M.A., F.C.A.
PETER G. MASEFIELD, M.A., F.R.A.E.S.
*A. J. NICOL
*D. A. OLIVER, C.B.E., M.SC.(ENG.), F.I.M.,
F.Inst.P.
THE RIGHT HON. LORD PIERCY, C.B.E.,
B.SC.
*I. J. PITMAN, M.A., M.P.
*L. POOLE, J.P.
GRAHAM SATOW, O.B.E.
SIR GEORGE SCHUSTER, K.C.S.I., K.C.M.G.,
C.B.E., M.C.
S. L. SIMPSON, M.A., M.D., F.R.C.P.
*A. M. D. WHITCROFT

Technical Advisory Board:

†SIR FREDERIC BARTLETT, C.B.E., D.SC.,
D.PHIL., D.PSYCH., M.A., F.R.S.
SIR CYRIL BURT, D.LITT., LL.D., D.SC.
SIR ALEXANDER M. CARR-SAUNDERS,
K.B.E., M.A.
H. V. DICKS, M.A., M.D., F.R.C.P.
†JAMES DREVER, M.A.
†G. C. DREW, M.A.
†H. M. GLUCKMAN, B.A., M.A., D.PHIL.
D. W. HARDING, M.A.
†L. S. HEARNshaw, M.A.
LI. WYNN JONES, M.A., PH.D., D.SC.
M. G. KENDALL, M.A., SC.D.
ESTHER KILLICK, D.SC., M.B., CH.B., M.R.C.P.
REX KNIGHT, M.A.
C. A. MACE, M.A., D.LIT.
A. MACRAE, M.A., M.D.
SIR BRYAN MATTHEWS, C.B.E., M.A.,
SC.D., F.R.S.
†D. A. OLIVER, C.B.E., M.SC.(ENG.), F.I.M.,
F.Inst.P.
T. H. PEAR, M.A., B.SC.
†D. D. REID, M.D., PH.D.
ALEC RODGER, M.A.
†R. S. F. SCHILLING, M.D., D.P.H.
J. D. SUTHERLAND, PH.D., B.SC., B.B.D., M.B.
CH.B., D.P.M.
W. H. THORPE, SC.D., F.R.S.
R. H. THOULESS, M.A., PH.D., SC.D.
†R. F. TREDGOLD, M.A., M.D., D.P.M.
C. W. VALENTINE, M.A., D.PHIL.
P. E. VERNON, M.A., PH.D., D.SC.
†N. A. B. WILSON, B.SC., PH.D.
S. WYATT, D.SC., M.ED.

*Member of Executive and Research Committee.

†Member of Scientific Advisory Committee.

Director: C. B. FRISBY, PH.D., B.COM.

Secretary: G. HUMPHREY SMITH, O.B.E.

Auditors:

Messrs. J. DIX LEWIS, CÆSAR,
DUNCAN & CO.

Hon. Solicitors:

Messrs. STEPHENSON, HARWOOD
& TATHAM

